

REMARKS

I. Status of the Application

By the present amendment, Applicants hereby amend claims 1- 3, 5 and 6. In addition, claim 4 is hereby canceled without prejudice or disclaimer. Claims 1-3, 5 and 6 are all the claims pending in the Application. Claims 1-6 have been rejected.

The present amendment addresses each point of objection and rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

II. Claim Rejections under 35 U.S.C. §103

The Examiner has rejected claims 1-6 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Japanese Patent No. JP 2002079803 to Teratani (hereinafter “Teratani”), and further in view of either one of U.S. Patent No. 4,193,437 to Powell (hereinafter “Powell”) or U.S. Patent No. 4,837,266 to Sattelmeyer (hereinafter “Sattelmeyer”). Applicant respectfully traverses these rejections for *at least* the independent reasons stated below.

As an initial matter, Applicant notes that claim 4 has been canceled without prejudice or disclaimer and, therefore, the Examiner’s rejection in this regard is now moot.

Further, in order for the Examiner to maintain a rejection under 35 U.S.C. §103, the cited references must teach or suggest all of the recitations of claims 1-3 and 5-6. Applicant respectfully submits that neither Teratani, Powell, or Sattelmeyer, nor any combination thereof, teaches or suggests all of the recitations of claims 1-3 and 5-6.

For example, each of the independent claims 1, 2 and 3 have been amended to recite (among other things):

...a phenol-formaldehyde resin and a curing agent therefor...

The Examiner acknowledges that the primary reference, Teratani, is silent regarding the features of a resin and a curing agent. Nevertheless, the grounds of rejection apply the cited Powell and/or Sattelmeyer references as allegedly teaching these features. Applicant respectfully disagrees with the grounds of rejection.

First, neither Powell nor Sattelmeyer teaches or suggests the feature of a phenol-formaldehyde resin, as claimed. In stark contrast to the recitations of claims 1, 2 and 3, Powell merely teaches that “[s]mall quantities of resorcinol and hexamethylene tetramine, which form a heat setting phenolic resin are advantageous in the composition.” Column 5, lines 25-28. Therefore, Powell teaches nothing more than the feature of a heat setting phenolic resin that formed by the reaction of resorcinol and hexamethylene tetramine. *See also* claim 6 and Table 1.

However, as one of ordinary skill in the art would recognize from the present specification, a phenol-formaldehyde resin has much better compatibility with a conjugate diene base polymer and carbon black than does a resorcin-formaldehyde resin. Indeed, such a better compatibility elevates the elastic modulus in 100% elongation, while achieving a surprisingly low dynamic elastic modulus (E'). *See e.g.*, page 11, lines 7-12. Consequently, Applicant submits that Powell fails to teach or suggest all the recitations of claim 1 for *at least* these reasons.

Sattelmeyer also fails to remedy the deficient teachings of Teratani. To the contrary, Sattelmeyer only teaches that the use of curable phenolic resins in the preparation of rubber vulcanizates has been known for a fairly long time. But, Sattelmeyer fails to provide any teaching or suggestion whatsoever regarding the feature of a phenol-formaldehyde resin, as claimed. Therefore, Applicant submits that claims 1, 2 and 3 would not have been obvious in view of the cited references for *at least* these reasons.

Secondly, even if the combination of the cited references did teach all of the claimed recitations as alleged by the Examiner, which Applicant firmly maintains the references do not, Applicant reaffirms that the combination recited in claims 1, 2 and 3 would not have been obvious to a skilled artisan in view of the cited references because the recited combination achieves new and unexpected results that are nowhere suggested in the prior art. *See* MPEP §2141. As evidenced by the present specification, for instance:

“The elastic modulus in 100 % elongation has preferably a larger value because of necessity to support the load in run flat running. Also, the dynamic elastic modulus (E’) at a room temperature has preferably a smaller value from the viewpoint of securing the riding comfort.” Page 11, lines 1-6.

Furthermore, Applicant draws the Examiner's attention to Figure A (shown below):

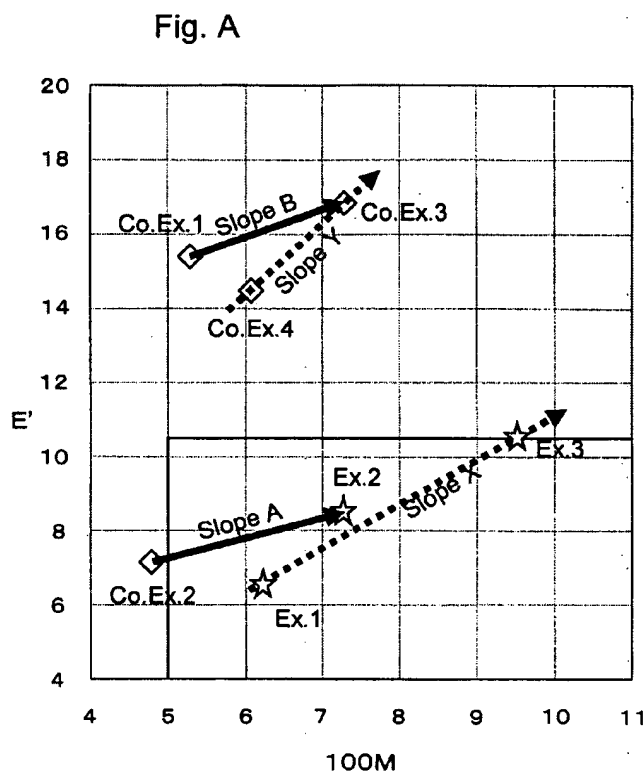


Figure A shows a graph plotting the data of Examples 1, 2 and 3 and Comparative Examples 1, 2, 3 and 4, all of which are disclosed in Table 1 of the originally filed specification. In particular, the graph shown in Figure A plots the dynamic elastic modulus (E') along the y-axis and the elastic modulus in 100% elongation (100M) along the x-axis. As shown in Figure A, the Slope A is $0.52 E'/100M$ and the Slope X is $1.15 E'/100M$ in Examples 1, 2 and 3. On the other hand, the Slope B is $0.65 E'/100M$ and Slope Y is $1.91 E'/100M$ in Comparative Examples 1, 2, 3 and 4.

As such, Figure A clearly illustrates that the combination of a conjugate diene base polymer, which has a vinyl bonding amount of 25% or more, a phenol-formaldehyde resin and carbon black, consistent with the present invention, obtains a rubber composition having a higher elastic modulus in 100% elongation (100M) and a lower dynamic elastic modulus (E'), than the combination of a conjugate diene base polymer, which has a vinyl bonding amount of less than 25%, a phenol-formaldehyde resin and carbon black. Accordingly, Applicant submits that the above illustration shown in Figure A provides ample evidence of the unexpected and non-obvious results obtained from the present invention.

Therefore, Applicant submits that the independent claims 1, 2 and 3 are patentable over the cited references for *at least* these additional reasons. Moreover, Applicant submits that the dependent claims 5-6 are patentable *at least* by virtue of their dependency. Thus, Applicant respectfully requests that the Examiner withdraw these rejections.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment under 37 C.F.R. § 1.114(c)
U.S. Serial No. 10/524,856

Attorney Docket No.: Q86415

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

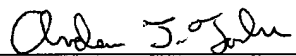
Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER



Andrew J. Taska
Registration No. 54,666

Date: March 7, 2007